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extraction circuit for extracting from the video data a plurality of header data each associated with one of a plurality of starting code types, the extraction circuit comprising:

a starting code detector receiving the video data, and operable to detect a starting code contained in the video data while the processor is executing the application program and operable to prevent an interrupt from being passed to the processor when a starting code is detected;

a branch circuit having an input connected to the starting code detector, and operable to branch the header data associated with the detected starting code type; and

a plurality of register units connected to the branch circuit for receiving the branched header data, each register unit being associated with one of the plurality of starting code types and each operable to store the header data associated with the register unit;

wherein the [state machine] branch circuit includes means for recognizing the occurrence of quantization tables in the video data and for branching the data relative to these tables to a circuit for restoring quantization arrays; [and]

wherein the [state machine] branch circuit is associated with a calculator for converting the header, data [contained in the headers,] prior to their storage in one of the [three] register [banks] units, into instructions directly interpretable by a video decoder and accessible in any order by a microprocessor; and

wherein the starting code detector generates an interrupt for the processor when all header data are stored in the plurality of register units.

4 . 5̶. (Amended) In a computer system having an application processor executing at least one application program and a video decoder decoding a video bitstream data for display, an extraction circuit for extracting from the video bitstream data a plurality of header data each associated with one of a plurality of header code types, the extraction circuit comprising:

a plurality of register units each associated with one of the plurality of header code types; and

a header processor having an input receiving the video bitstream data and an output connected to the plurality of register units, the header processor operable to detect a

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header code contained in the video bitstream data and upon detection route the associated header data to its output for storage by the register unit associated with the detected header code type, the header processor performing the detection and routing while the application processor is executing the application program; wherein the header processor includes:

means for recognizing the occurrence of quantization tables in the data flow and for branching the data relative to these tables to a circuit for restoring quantization arrays;

a calculator for converting the data contained in the headers, prior to their storage in one of the register units, into instructions directly interpretable by a video decoder and accessible in any order by a microprocessor; and

a starting code detector that generates an interrupt for the application processor when all header data are stored in the plurality of register units.

5. 7.   (Amended) In a computer system having a processor executing a plurality of programs and a video decoder decoding a video data for display, a method of extracting from the video data a plurality of header data each associated with a starting code, the method comprising the steps of:

receiving the video data containing the plurality of header data and the associated starting codes; [and]

repeating the following steps at least two times independent of the processor:

detecting a starting code in the received video data;

routing the associated header data to an associated one of [the] a plurality of register units according to the detected starting code type; and

storing the associated header data in the associated register unit;

recognizing the occurrence of quantization tables in the video data and branching the data relative to these tables to a circuit for restoring quantization arrays;

converting the header data, prior to their storage in one of the register units, into instructions directly interpretable by a video decoder and accessible in any order by a microprocessor; and

interrupting the processor when all header data are stored in the plurality of register units.

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1. 10.   (Amended) A device for extracting parameters for decoding a video data flow, contained in headers coded according to an MPEG standard, said headers being preceded by a starting code, said device [including] comprising:

means for organizing, independently and according to the starting code, a storage of the parameters in three register banks:[, and]

a starting code detector, implemented in wired logic: [and associated with]

a state machine, associated with the starting code detector, for branching the contents of the headers to the register banks according to the starting code detected: wherein the state machine includes means for recognizing the occurrence of quantization tables in the data flow and for branching the data relative to these tables to a circuit for restoring quantization arrays;

a calculator, associated with the state machine, for converting the data contained in the headers, prior to their storage in one of the three register banks, into instructions directly interpretable by a video decoder and accessible in any order by a microprocessor; and

wherein, in an automatic operating mode, the detector generates an interrupt for the microprocessor, only when all decoding parameters have been stored in the three register banks.

REMARKS

Claims 1-2, 4-5, 7-8, 10, 13-14, and 16 will be pending upon entry of the present amendment. Claims 1, 5, 7, and 10 are being amended. Claims 3, 6, 9, 11-12, 15, and 17 are being canceled.

The applicant would like to thank the Examiner for the telephone interviews with the applicant's attorney on February 16 and 23, 2000. The applicant understands that the Examiner agreed that claim 1 would be allowable if amended to include the elements of canceled claim 3. Claim 1 is being amended as suggested by the Examiner. In addition,